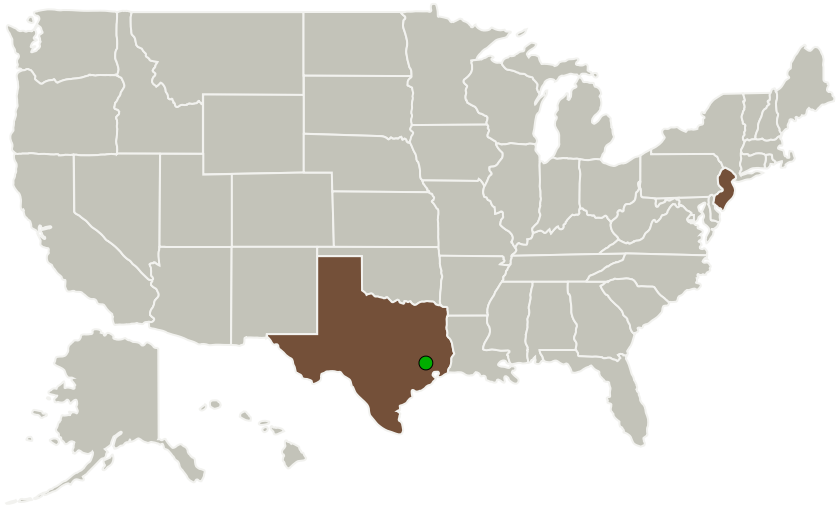
Radiation Tolerant Software Defined Video Processor, Phase I

Completed Technology Project (2011 - 2011)

Project Introduction

MaXentric's is proposing a radiation tolerant Software Define Video Processor, codenamed SDVP, for the problem of advanced motion imaging in the space environment. SDVP will take advantage of state of the art rad-hard by design (RHBD) manycore processors to provide radiation tolerant reprogrammable encoder, video enhancement, and other video processing capabilities for HDTV, digital cinema camera, and other image sensors used in the operations on orbit, while withstanding radiation damage that degrades image quality and performance. Furthermore SDVP will improve the motion imaging technology in the space by offering standard compliance flexibility, multimode operation and power management capabilities. As missions evolve, parameters change that can affect the ideal motion imaging configurations. SDVR highly programmable platform will make it easy to upload patches, upgrades, and new applications and improvements, hence providing "Future-proof" video processing and over-the-air reconfiguration. SDVP can support other applications in parallel with video processing, reducing SWaP of the greater system.

Primary U.S. Work Locations and Key Partners



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Organizations Performing Work	Role	Type	Location
MaXentric Technologies, LLC	Lead Organization	Industry	Fort Lee, New Jersey
Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Primary U.S. Work Locations	
New Jersey	Texas

Project Transitions

February 2011: Project Start

September 2011: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/138440)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

MaXentric Technologies, LLC

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

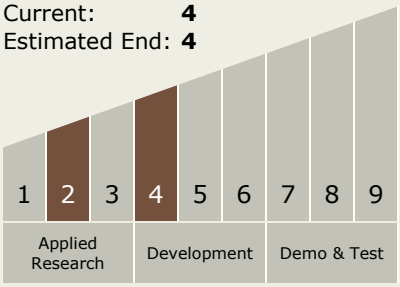
Carlos Torrez

Principal Investigator:

Scott Ricketts

Technology Maturity (TRL)

Start: **2**
Current: **4**
Estimated End: **4**



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Technology Areas

Primary:

- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
  - TX05.2 Radio Frequency
    - TX05.2.1 Spectrum-Efficiency

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System